INFESTATIONS OF *APHIS VERBASCI* SCHRANK (HEM.: APHIDIDAE) ON *BUDDLEJA* AND *VERBASCUM*

A.J. HALSTEAD[1] AND B.M. SPOONER[2]

[1] *RHS Garden, Wisley, Woking, Surrey GU23 6QB.*

[2] *31 Balmoral Crescent, West Molesey, Surrey KT8 1QA.*

A SEVERE infestation of *Buddleja davidii* Franchet by an ant-attended aphid producing copious honeydew was noted in 1996 and 1997 in the garden of B.M.S. at West Molesey, Surrey. This pale green or yellow aphid was present in huge numbers and formed dense clusters, particularly on the underside of leaves. It was identified by A.J.H. as *Aphis verbasci* Schrank, an uncommon but perhaps now spreading species which is widespread in Europe and typically has species of *Verbascum* as its host plant. This infestation, noted in late summer, was on two bushes, both five to six years old and two to three metres high, and resulted in severe blackening of stems and branches with sooty mould, causing death of many of the inner ones by late season. No attempt at insecticidal or other control of the aphids was attempted, nor is the source of the infestation known.

Aphis verbasci was first recorded in the British Isles from Ilford, Essex, on *Verbascum phlomoides* L. in July 1952 (Doncaster 1954); Stroyan (1984) knew of no other British records. However, further records on *Buddleja*, a host also known for this aphid in Europe, have been made in Britain in recent years indicating a spread of the species. The first British record of *A. verbasci* on *Buddleja davidii* was made by Badmin (1995). In 1992 and 1993 he found it on a plant at Woodstock, near Sittingbourne, Kent. He also refers to heavy infestations on *Verbascum thapsus* L. at Hoo Salt Marsh Island in the Medway estuary in September 1982 and at Great Culand Pit, near Maidstone, Kent in July 1993. Stroyan (1984) also gives *Verbascum sinuatum* L. as a host plant but gives no further details of what is presumably a continental record. Other more recent records, all on garden plants, made by A.J.H. are on *Buddleja davidii* at Petersham, Surrey on 1.vii.97 and at Goldsworth Park, Woking, Surrey on 15.vi.98; on *Verbascum phoeniceum* L. at Knaphill, near Woking, Surrey on 2.vii.97; on *Verbascum* sp. probably *blattaria* L. at Loseley House, near Guildford, Surrey on 3.ix.97; on *Verbascum pulverulentum* Vill. at RHS Garden, Wisley, Surrey on 5.viii.97. On the last-mentioned plant the infestation persisted until mid November. *Aphis verbasci* is a distinctive aphid with a globular body that is usually golden yellow with long black siphunculi. The aphids found on *V. pulverulentum* in August were of the typical colour but by November they had become pale green with a light whitish waxy coating. It reappeared in small numbers on the underside of *V. pulverulentum* leaves in mid April 1998, again in the pale green colour form. On 15.vii.98 the aphid was found on *Buddleja salviifolia*, also at RHS Garden.

Buddleja davidii (Buddlejaceae) is an exotic shrub, native to China and Japan and introduced as a garden plant into Britain a century ago. It is now also widely naturalised and common, especially on waste ground, throughout much of central

and southern England. Flowers of *Buddleja* are rich in nectar (Owen 1991), and the value of this plant as a source of food for insects has earned it the well-deserved popular name of "butterfly bush". It is attractive to many butterflies and is also visited by various moths such as Silver Y, many hoverflies including species of *Eristalis*, *Helophilus* and *Rhingia* (Owen 1983), and some solitary bees such as *Halictus calceatus* (Scop.) (Chinery 1977). It is also utilised in various ways by a range of other invertebrates and Owen (1991) has referred to it as the "most widely used plant species in the garden". Owen D.F. and Whiteway (1980) praise it as a rare example of an alien plant that is a welcome addition to the British flora because of its value to wildlife. Various polyphagous moths are known to feed as larvae on the leaves and Owen D.F. (1983) cites 23 species as known from this host, as well as the holly blue butterfly. It is also host to a number of other polyphagous pest species although, amongst aphids, only *Macrosiphum euphorbiae* (Thomas) (Owen 1991) and the ubiquitous *Aphis fabae* Scop. (Stroyan 1984) appear to have been recorded. There are no true gall-causing invertebrates associated with *Buddleja*, although leaf and flower distortion by the polyphagous nematode *Aphelenchoides ritzemabosi* (Schwartz) may occur (Alford 1991; Buczacki & Harris 1981). In addition, leaves may be damaged by capsid bugs, particularly *Lygocoris pabulinus* (L.), and the weevil *Otiorhynchus singularis* (L.) may also cause damage (Alford 1991). Finally, the spider-mite *Tetranychus urticae* Koch is known to cause chlorotic leaves, with silk webbing in severe outbreaks (Alford 1991). Owen D.F. and Whiteway (1980) also record the polyphagous common froghopper, *Philaenus spumarius* (L.).

Of particular interest is the evident chemical similarity between *Buddleja* and some members of the Scrophulariaceae (Owen 1983, 1991), as shown by otherwise monophagous and specific feeders on plants of the Scrophulariaceae being able to utilise *Buddleja*. *Aphis verbasci* is an example of this; others include the mullein moth *Cucullia verbasci* (L.), and the weevils *Cionus alauda* (Herbst) and *C. scrophulariae* (L.); the last two are occasionally found on *Buddleja globosa* Hope (A.J.H. *personal observation*) and *B. davidii* (Williams 1974). The leaf-mining fly *Amauromyza verbasci* (Bouché), normally on species of *Verbascum* and *Scrophularia*, is also notable and is the only leaf-miner known on *Buddleja* in Great Britain.

Interesting observations on *Buddleja* as a foodplant for insects are given by Owen (1983, 1991).

References

Alford, D.V., 1991. *A Colour Atlas of Pests of Ornamental Trees, Shrubs and Flowers*. Wolfe Publishing Ltd., London.

Buczacki, S. & Harris, K., 1981. *Collins Guide to the Pests, Diseases and Disorders of Garden Plants*. Collins, London.

Badmin, J.S., 1995. A new hostplant in Britain for *Aphis verbasci* Schrank (Hem., Aphididae). *Entomologist's Mon. Mag.* **131**: 18.

Chinery, M., 1977. *The Natural History of the Garden*. Collins, London.

Doncaster, J.P., 1954. Two aphids new to Britain. *Entomologist* **87**: 127-128.

Owen, D.F., 1983. Lepidoptera larvae feeding on the leaves and flowers of *Buddleia davidii*. *Entomologist's Rec. J. Var.* **95**: 20

Owen, D.F. & Whiteway W.R., 1980. *Buddleia davidii* in Britain: History and development of an associated fauna. *Biological Conservation* **17**: 149-155.

Owen, J., 1983. *Garden Life*. Chatto & Windus, London.

–, 1991. *The ecology of a garden. The first fifteen years*. Cambridge University Press, Cambridge.

Stroyan, H.L.G., 1984. Aphids – Pterocommatinae and Aphidinae (Aphidini) Homoptera, Aphididae. *Handbooks for the Identification of British Insects* **2** (6). Royal Entomological Society, London.

Williams, S.A. (1974). Two species of *Cionus* (Col.: Curculionidae) on *Buddleia davidii* Franch. *Entomologist's Mon. Mag.* **110**: 63.

Hazards of butterfly collecting — A bad day in Oyster Bay, Tanzania, 1977

I had spent three weeks with a Ugandan colleague, Wilson Okwenje, reviewing the programmes of UMATI, the Tanzanian Family Planning Association. We had criss-crossed Tanzania, but with little chance of butterfly collecting, except a brief and rather embarrassing visit to the upland forest of Uluguru Mountains (see 1992. *Ent. Rec.* **104**: 253-255). So, I was looking very much forward to a day's collecting in the well-known lowland forests of Pugu, just inland from Dar es Salaam – or Dar as it is usually known.

This was in the bad old days before portable computers, so the manuscript of our report had been written in laborious longhand, ready for a typist in Nairobi during a brief stay for debriefing – on my way for another review mission to Ghana. But Sunday was for butterfly collecting in the Pugu Forests.

We had an amicable discussion with the UMATI Board on Friday afternoon; there would not be that much revision to be done during Saturday. We duly repaired to a choice restaurant at Oyster Bay, a Dar suburb. Wilson and I grabbed our briefcases. No, no, no!, said out hosts, we'll lock them in the boot of the car. We had a very fine meal indeed.

Coming back to the car, we saw the lid of the boot flapping listlessly in the wind. Closer inspection showed that my briefcase was missing. Wilson's was still there; the thief obviously had not wanted to wander off carrying two briefcases. "Anything important in the briefcase?", asked our hosts. Well, yes, actually! Passport, credit card, driving licence, health certificates, airline ticket, travellers cheques, currency declaration form, and – of course – a 300 page manuscript summarising the experience of two people after three weeks of hard work!

We went back to the restaurant to take stock. I had heard Danish spoken and went over to inquire – a young, blonde woman turned out to be a secretary to the